



Pesticide Notes

A bi-monthly newsletter from the
Michigan State University
Pesticide Education Program



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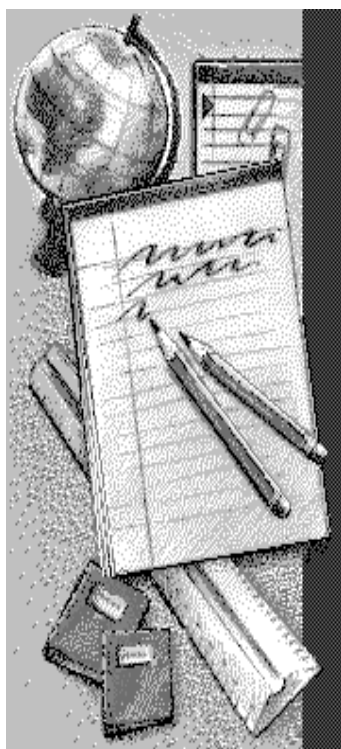
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GAO Releases Findings on Pesticide Use in Schools (Adapted from *The Label*, Purdue Pesticide Programs, April 2000)

Pesticides in schools is an issue that started at the local level and subsequently blossomed into a full-fledged national debate over whether or not pesticides can be used safely in schools. Parents concerned for the health of their children pressured school authorities to stop or severely limit pesticide use on school premises; in some cases, school superintendents were obliged

to *guarantee* that school children would not be exposed to chemicals. The parents behind these measures, joined by others with similar views, brought to the attention of state agencies and legislators that regulatory action is needed for the protection of school children from pesticide exposure.

Several states have enacted laws, regulations, or policies that require schools to develop pesticide policies (including parent notification) and maintain pesticide use records. Some states rank pesticides as good or bad by placing them on lists tagged red, green, or yellow! Parents serve on committees that determine what constitutes “safe” pest control, that set timespans (commonly longer than those required on the pesticide label) during which children cannot enter treated areas, and that mandate posting of school buildings or grounds when pesticides are used. Some school districts mandate that pesticides no longer be used, and pest control operators are obliged to accommodate school policy that is written into the contract signed by both parties.

The issue of pesticide use in schools has captured the attention of parents and politicians alike. Congress is very interested in looking into federal legislation that would mandate that all schools adopt an integrated approach to pest management. A key player in the debate is Senator Joseph Lieberman who asks the Government Accounting Office (GAO), the investigative arm of Congress, to look at what is

known about the use of pesticides in schools. Responding to Senator Lieberman’s request, GAO released their findings in a report called *Use, Effects, and Alternatives to Pesticides in Schools*. In general, the GAO report may be summarized into four simple works: We don’t know enough!

What federal requirements govern the use of pesticides in schools?

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) regulates where and how pesticides are used; but it contains no provisions specific to the use of pesticides in schools. EPA will register a pesticide only if they determine that its use will not cause unreasonable adverse effects on human health (which includes children) when applied according to label instructions. All pesticide applicators, whether technicians for a pest control company or custodians in a school, are *legally required* to follow label directions. Currently, more than 3,000 out of 17,000 pesticide labels allow use in schools.

What information exists on the use of pesticides in schools?

There is no single, comprehensive source of information that adequately identifies pesticides (and quantities) that are being used in the nation’s schools. Only New York and Louisiana require their schools to report quantities used—but their data have never been analyzed. EPA is considering pesticide use surveys in 2001 to gather nationwide information on the types and amounts of pesticides used in public schools.

What data exist on the incidence of illness linked to exposure of children in schools?

Information on short-term illnesses linked to exposure of school children to pesticides is limited to data collected from the Association of Poison Control Centers (although not all poison control centers report). Their data indicate that between 1993 and 1996 there were 2,300 reported exposures linked to pesticide applications in schools: 329 individuals were seen in health care facilities, 15 were hospital-



ized, and 4 were treated in intensive care units. Follow-up on most cases is not documented.

Are EPA and the states taking action to reduce the use of pesticides in schools?



This was the positive part of the GAO report. EPA, the states, and industry were shown to have taken a number of steps to reduce the use of pesticides in schools. School custodians and other employees were educated on integrated pest management in an effort to reduce the potential for exposure of school children to pesticides.

The GAO's revelation that we do not know enough about pesticide use in schools has fueled the debate. Advocacy groups nationwide are demanding

legislation to shield our children from pesticide exposure in the 100,000 schools in the United States; the bill is currently before Congress. The issue will take center stage this year as parents, children's advocates, school and government officials, and pest control industries haggle to be heard as we struggle to assure that our kids are safe from pests and pesticides in school. For some the issue is how best to use pesticides in school environments, and for others it is whether to use them at all.

Source: *Use, Effects, and Alternatives to Pesticides in Schools*. 2000. GAO/RCED-00-17.

Located at www.gov/new.items/bysubject.htm#7.

	<h2>Chemical Update</h2> <p>The following information provides registration status of particular pesticides and should not be considered as pesticide recommendations by MSU Extension.</p>	
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Chemical Update

*Products are listed by trade name with active ingredient name and manufacturer following. Please note that multiple manufactures may make the same product. A change in the registration, formulation, or label of a product from one manufacturer **may not apply** to the same product made by another manufacturer. If you have any doubts about the status of a pesticide, please read a current label and/or check with the manufacturer directly.*

Residue Tolerances:

Insecticides

- Agri-mek (abamectin; Novartis)—proposed residue tolerances on fruiting vegies at 0.02 ppm, leafy vegies at 0.1 ppm, and plums at 0.01 ppm.
- Baythroid (cyfluthrin; Bayer)—proposed residue tolerances on cereal grains, corn oil, corn milled products, wheat milled products, wheat bran.
- Danitol (fenpropathrin; Valent)—residue tolerances established at 3ppm for brassica head and stem vegies, 0.5 ppm for cucurbits, 5 ppm for grapes, 5 ppm for pome fruits, 10 ppm for raisins.
- Decis (deltamethrin; Aventis)—proposed residue tolerances on bulb, fruiting, and leafy vegetables, broccoli, cabbage, carrots, cauliflower, cucurbits, field corn, pome and stone fruits, potato, radish, and sorghum.

- Dimilin (diflubenzuron; Uniroyal)—proposed residue tolerances on rangeland grass at 6 ppm. Tolerance is the result of the IR-4 Project.
- Guacho (imidacloprid; Gustafson)—time limited tolerances set on corn fodder at 0.02 ppm, corn grain at 0.05 ppm, and corn forage at 0.1 ppm. Expire 12/31/00.
- Nylar (pyriproxyfen; MGK)—proposed residue tolerances in food handling facilities at 0.1 ppm.

Herbicides

- Basagran (bentazon; BASF)—residue tolerance on peas set at 3 ppm.
- Flufenacet (Bayer)—proposed residue tolerances on seed grass, sweetcorn, and wheat.
- Raptor (imazamox; AmCy)—proposed residue tolerances on alfalfa, canola, wheat.
- Select (clethodim; Valent)—proposed residue tolerances on clover, cucurbits, cranberry, strawberry, and fruiting/ leafy/ root/ tuber vegetables.



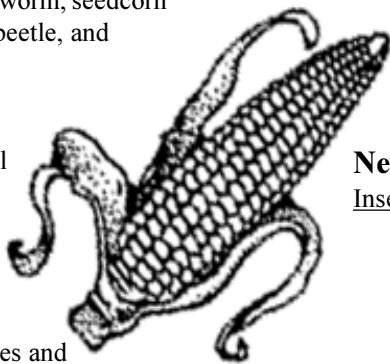
Fungicides

- Acrobat (dimethomorph; AmCy)—proposed residue tolerances on tomatoes; fruit at 0.5 ppm, paste at 1.5 ppm, and puree at 0.5 ppm.
- Vitavax (carboxin; Uniroyal)—proposed residue tolerances on dry onions at 0.2 ppm.
- Carboxin (Gustafson)—proposed residue tolerances on canola at 0.03 ppm.
- Maxim (fludioxonil; Novartis)—proposed residue tolerances on dry onions, garlic, and shallots at 0.2 ppm, green onions and leeks at 7 ppm, strawberries at 2 ppm, and stone fruits at 2 ppm. Tolerances are the result of the IR-4 Project.

Label Additions/Changes:

Insecticides

- Admire (imidacloprid; Bayer)—control of aphids, cucumber beetles, thrips, and whiteflies on Chinese okra, cucumber, and squash added to label.
- Admire (imidacloprid; Bayer)—grape phylloxera added to label.
- Capture (bifenthrin; FMC)—at-planting banded soil treatment added to the corn label, to control corn rootworm, cutworm, seedcorn maggot, seedcorn beetle, and wireworm.
- Maxforce (hydamethylnon; Maxforce)—control of silverfish added to the label.
- Oviation (clofentezine; Scotts)—may be used to control mites and mite eggs on Christmas trees, greenhouse crops, and non-bearing fruit trees.
- Talstar (bifenthrin; FMC)—fire ant control added to the label.



Herbicides

- Firstrate (cloransulam-methyl; DowAgroSci)—aerial application to soybean added to label.
- Frontrow (cloransulam-methyl/ flumetsulam; DowAgroSci)—aerial application to soybean added to label.
- Canopy XL (sulfentrazone/ chlorimuron-ethyl; Dupont)—can now be applied in the fall on conservation-till and no-till soybean.
- Reglone (diquat; Zeneca)—potato vine kill product marketed in 2000.

Fungicides

- Auxigro WP (GABA; Auxien Corp.)—added powdery mildew and bunch rot on grapes to the label.

- Champ Formula 2 (copper hydroxide; Agtrol)—control of phomopsis on grapes added to the label.
- Copper Count N (ammoniated copper; Mineral Res.)—fruits and vegetables added to the label.
- Ridomil Gold EC (mefenoxam; Novartis)—pink rot and pythium leak control in potatoes added to the label.
- Nordox (copper oxide; Monterey Chem)—fruits, vegetables, ornamentals added to the label.
- Elexa (chitosan; Safe Sci.)—now labeled to control botrytis, downy mildew, and powdery mildew on greenhouse crops, herbs, and shrubs.
- Erase (jojoba oil; IJO Products)—now labeled to control powdery mildew on ornamentals.
- Orbit (proproconazole; Novartis)—prunes added to the label.
- Root Shield (*Trichoderma harzianum*; BioWorks)—now labeled to control *Fusarium*, *Pythium*, and *Rhizoctonia* on greenhouse crops.

Label Deletions/Cancellations:

Fungicides

- Bayleton (triadimefon; Bayer)—company requested deletion of cucurbits, grass grown for seed, sugarbeet, and wheat from the label. Unless withdrawn, request is effective 8/14/00.

New Registrations:

Insecticides

- Eco2 Fume (phosphine gas; Cytec)—EPA conditionally registered this new fumigant to control insects, but only for non-food commodities.
- Termidor (fipronil; Aventis)—new termiticide, available in 2000.

Herbicides

- Aim (carfentrazone-ethyl; FMC)—new registration of pre-plant burn-down herbicide. Speeds burn down of glyphosate products.
- Connect (bromoxynil; Aventis)—new formulation for use on corn.
- Devinol 2G (napropamide; United Phos.)—new herbicide formulation registered for flower gardens and turf.
- Manor (metsulfuron-methyl; Riverside)—new herbicide for turf available in 2000.

Fungicides

- Contrast (flutolanil; Scotts)—now registered for use on all ornamental crops.
- NoGall (*Agrobacterium radiobacter* strain; BioCare Tech.)—new biocontrol agent registered to prevent crown gall in non-food and non-bearing nursery stock.



Miscellaneous:

- Dow Agrosiences—has a research alliance with Michigan State University, Brookhaven Labs, Miami University, and Washington State to improve oil crops such as canola, soybean, and sunflower.
- Fortress (chlorothoxyfos; Dupont)—was acquired by Amvac. Fortress is a soil insecticide used to control rootworm in corn.
- Lepinox WDG (a Bt insecticide; Ecogen)—will now be marketed by FMC in the U.S. and Mexico.
- Cenex/ Land O'Lakes Agronomy Company—is now Agrilience LLC.

(Source: EPA Press releases, Federal Register, and *Ag. Chem. News* 4/15/00 & 5/15/00)



News Extras



Lansing Youth Teach Kids About Head Lice

Doesn't sound like a possible statement, does it? Why would teens want to have anything to do with head lice?

Yet if you went into the lower level of the Bethlehem Lutheran Church in Lansing on the evening of March 30th, this is exactly what you would have seen. Stephanie Money Penny and Shatecca Perry, members of the City Kids 4-H club, taught a head lice education program to children during a community head lice training put on by P.E.S.T. (People and the Environment, Stewardship Together), Michigan State University, and Michigan Department of Agriculture.



Stephanie and Shatecca led a short program on head lice, read a story called "Yikes, Lice!" by Donna Caffey, and showed a video on safely combing out head lice. The kids then worked on a fun workbook on head lice or made posters about head lice and insects. Erica Jenkins from the Michigan State University Pesticide Education Program wrote the materials for this program and trained the teens.

While this program was taking place in the basement, a head lice IPM training program for adults was taking place upstairs. P.E.S.T., which hosted the event, is a community pesticide working group located in the Baker-Donora neighborhood of Lansing. P.E.S.T. is one of four community pesticide education working groups located in the cities of Lansing, Detroit, Ypsilanti and Saginaw. The mission of these groups is to work together to reduce the health and environmental risks of pests and pesticides in their communities.

P.E.S.T. is made up of 14 active members of the Baker-Donora community who are interested in improving the quality of life of neighborhood residents. Under the leadership of Michigan State University Pesticide Education Program and Michigan Department of Agriculture, this group plans and implements community training programs

on pests of concern to residents. Since the group formed in January, over 150 people have attended three community meetings on general pest management, cockroach IPM, and head lice management. Many more trainings and hands-on learning opportunities are planned for the future.

The youth program was a huge success and was a great experience for the youth and the kids. This type of youth-led program will now be a part of all our future community trainings. We would like to thank Stephanie and Shatecca for their hard work!

The MSU Pesticide Education Program and College of Resource Development have received funding for this and other community pesticide programs through a grant from EPA, Region 5 under the National Urban Initiative. If you would like more information or resources on this or other community or school IPM programs please contact Erica Jenkins, Community and School IPM specialist at 517-353-4494 or via email at jenkinse@msue.msu.edu.

GMO Tidbits

A number of corporations (Aventis, BASF, Dow Chemical, Dupont, Monsanto, Novartis, and Zeneca) banded together to form the Council for Biotechnology Information. This group is spending \$50 million over the next few years to talk about the benefits of transgenic crops. Ads sponsored by CBI are already appearing on your local TV station.

The nonprofit research group NCFAP, the National Center for Food and Ag Policy, recently released a report ("Agricultural Biotechnology: Benefits of Transgenic Soybean") quantifying the benefits of Roundup Ready soybeans. Last year, 70 million acres of soybean were planted in the U.S.; about 60% of that acreage was planted to Roundup Ready beans, which are tolerant to the herbicide glyphosate. (The percentage of Michigan acres is likely higher.) The NCFAP report estimates that in 1998, farmers spent \$220 million *less* on weed control in soybean than in 1995, before Roundup Ready beans came on the market. NCFAP receives funding from many sources, including ag industry and government agencies. The soybean report was funded by the Rockefeller Foundation.



MSU and MDA Host PREP Conference

In mid-April, the MSU Pesticide Program and the MDA Pesticide Section hosted a Pesticide Regulatory Education Program (PREP) in East Lansing. PREP is a national EPA-sponsored training workshop for ag department personnel involved in pesticide regulation and inspection. Regulatory personnel from around the country attend these programs, which feature classroom and hands-on instruction on a particular topic. The topic of the Michigan PREP was school and urban IPM. Twenty-nine "students" from 25 states (including Larry Perreault, MDA Saginaw office) and 25 speakers participated in the 4-day workshop. The most popular event of the program was a visit to Walter French Academy, a charter school in Lansing, to investigate a mock pesticide misuse incident. Participants split into groups to speak to an ill student, a parent, the high school principle, custodian, teacher, PCO, store owner, and a news reporter. After the interviews, the participants also conducted an IPM inspection of the school. Overall, the course was a success, with 90% of the students rating it as "very useful." Most also want an advanced version of the course in 2001 if school IPM legislation passes on the federal level.

Dioxin is a Human Carcinogen: EPA Set to Release Long-awaited Report

The most potent form of dioxin, 2,3,7,8 tetrachlorodibenzo-p-dioxin or TCDD, will be upgraded from a "probable human carcinogen" to a "human carcinogen" by EPA. This places dioxin into the category of Type A carcinogen along with such compounds as asbestos and vinyl chloride. The official announcement is expected in mid-June, as EPA releases a report on dioxin levels and health effects, including cancer.

Dioxin has both natural and man-made sources. Municipal, medical, and hazardous waster incinerators and pulp/paper mills are the largest man-made sources of these chemicals, although any kind of combustion may produce them—backyard burn barrels, automobiles, etc. Forest

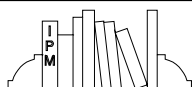
fires are a natural source. Dioxin's most troubling claim to fame, however, was as a contaminant of Agent Orange herbicide used in Vietnam.



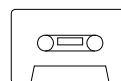
Dioxins are everywhere, in soil, air, and in food. The main route onto plants appears to be deposition from the air. Fruits and vegetables, therefore, can contain trace amounts of dioxin. A more important source of dioxin in the diet is meat and dairy products. Dioxin, like DDT and PCBs, bioaccumulates. It concentrates in fatty tissue of fish, mammals, and people, remaining for years or forever. Red meat, fish, and milk (including human breast milk) can therefore have higher levels of dioxin than produce.

Dioxin has been linked to certain human cancers, such as lymphomas. On the positive side, our exposure to dioxin has fallen over the years. The EPA report notes that dioxin emissions fell dramatically since the 1970s; just between 1987 and 1995, emissions dropped 80%. But at the same time, the EPA report reevaluates the risk of dioxin, suggesting that negative effects occur at lower levels than previously thought. For people eating a high proportion of fatty foods, the report says the chance of developing cancer could be as high as 1 in 100—10 times higher than EPA's previous assessments. The report also suggests that since kids have a smaller body weight and consume more dairy products, their dioxin intake is proportionally higher than adults. At very low levels, dioxin has been implicated as an endocrine (hormone) disrupter, leading to developmental defects in children.

Watch EPA's web page for the report, due out June 12th. The report is currently in peer review. (EPA press releases, meeting; MDA lab)



Resources



Mosquito Fact Sheets Developed by EPA

EPA recently released a series of mosquito fact sheets directed at consumers. The fact sheets cover risks/benefits of mosquito control pesticides, the combination of pesticides with mosquito prevention techniques, plus EPA's role in local mosquito control programs. The following titles are available:

- Questions and Answers: Pesticides and Mosquito Control
- Larvicides for Mosquito Control (735-F-00-002)

- Synthetic Pyrethroids for Mosquito Control (735-F-00-004)
 - Naled for Mosquito Control(735-F-00-003)
 - Malathion for Mosquito Control (735-F-00-001)
- All documents can be found on EPA's

web site at:
<http://www.epa.gov/pesticides/factsheets/skeeters.htm>



Hot Web Sites

Kids and Chemicals: EPA web page for kids, "Learn about Chemicals in Your Home." The site features puzzles and a virtual home tour to learn about common household products.

<http://www.epa.gov/opptintr/kids/hometour/index.htm>

Pesticide Safety: EPA Bingo Game on Pesticide Safety

<http://www.epa.gov/region6/6pd/bingo/index.htm>

Biological Control: Midwest Biocontrol News is now online.

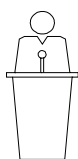
<http://www.entomology.wisc.edu/mbcn/>

Plants: OSU Plant Dictionary—history, biology, technology, pests, and diseases of plants. Particularly for use in courses or by Master Gardeners.

<http://www.hcs.ohio-state.edu/plants.html>

Gardening: The History of Gardening, A Timeline From Ancient Times to the 20th Century. Noteworthy publications, people, and events in the History of Gardening, including information from Agriculture, Natural History, Botany, and Ecology. An almost overwhelming site...great for your Master Gardener programs.

<http://www.gardendigest.com/timegl.htm#Start>



Pesticide Applicator Recertification Seminars

This partial listing of recertification seminars was provided by MDA. Certified applicators and registered technicians may earn recertification credits by attending these programs. For additional information, call the MDA Lansing office at (517) 373-1087.

NOTE: Renewal of pesticide applicator certification credentials can be done by taking the appropriate exam(s) or by obtaining the necessary number of recertification credits by attending approved seminars.

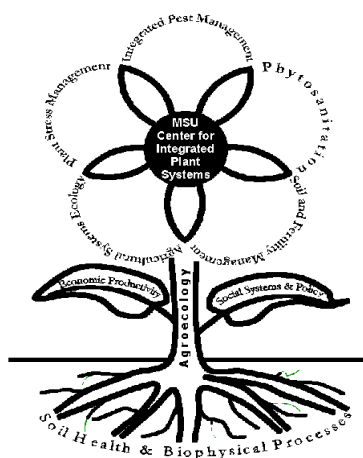


Date	Seminar	Location	Credit	Category	Phone#
6/1	Consultants IPM Meeting	Comstock Park, MI	1	Priv,ComCore,1C	(800)767-1345
6/2	IPM Update-Belding Fruit Growers	Belding, MI	1	Priv, 1C	(616)887-8333
6/6	Fruit Spray Update	Benton Harbor, MI	1	Priv,1C	(616)657-7745
6/8	Consultants IPM Meeting	Comstock Park, MI	1	Priv,ComCore,1C	800)767-1345
6/9	IPM Update-Belding Fruit Growers	Belding, MI	1	Priv,1C	(616)887-8333
6/10	Microbial Pest Management	Livonia, MI	4	ComCore,5B	(734)462-4400
6/13	Fruit Spray Update	Paw Paw, MI	1	Priv,1C	(616)657-7745
6/14	IPM Update For Fruit Growers	Old Mission, MI	1	Priv, 1C	(616)922-4620
6/15	Consultants IPM Meeting	Comstock Park, MI	1	Priv,ComCore,1C	(800)767-1345
6/16	IPM Update-Belding Fruit Growers	Belding, MI	1	Priv,1C	(616)887-8333
6/20	Fruit Spray Update	Benton Harbor, MI	1	Priv,1C	(616)657-7745
6/22	Basic Food Plant Sanit. & Pest Mngt	Los Angeles, CA	8	ComCore,7A,ST	(913)782-7600
6/27	Fruit Spray Update	Paw Paw, MI	1	Priv,1C	(616)657-7745
6/28	IPM Update for Fruit Growers	Old Mission, MI	1	Priv,1C	(616)922-4620
6/29	Consultants IPM Meeting	Comstock Park, MI	1	Priv,ComCore,1C	(800)767-1345
6/30	IPM Update-Belding Fruit Growers	Belding, MI	1	Priv,1C	(616)887-8333
7/11	Fruit Spray Update	Paw Paw, MI	1	Priv,1C	(616)657-7745
7/11	IPM Update Belding Fruit Growers	Belding, MI	1	Priv,1C	(616)887-8333
7/12	IPM Update for Fruit Growers	Old Mission, MI	1	Priv,1C	(616)922-4620
7/13	Consultants IPM Meeting	Comstock Park, MI	1	Priv,ComCore,1C	(800)767-1345
7/25	Fruit Spray Update	Benton Harbor, MI	1	Priv,1C	(616)657-7745
7/26	IPM Update for Fruit Growers	Old Mission, MI	1	Priv, 1C	(616)922-4620
7/27	Consultants IPM Meeting	Comstock Park, MI	1	Priv,ComCore,1C	(800)767-1345
8/8	Fruit Spray Update	Paw Paw, MI	1	Priv,1C	(616)657-7745
8/9	IPM Update for Fruit Growers	Old Mission, MI	1	Priv, 1C	(616)922-4620
8/22	Fruit Spray Update	Benton Harbor, MI	1	Priv,1C	(616)657-7745

Instructions for recertification training seminar attendance and training seminar dates are posted at the MDA website:
<http://www.mda.state.mi.us/industry/schedule.html>



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Pesticide Education Staff Directory

Pesticide Education Program www.pested.msu.edu

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